

**Arab Board**  
**Anaesthesia Exam**  
**First Exam-Paper Two**  
**April, 2012**

1. A patient with polycythemia has all the following EXCEPT:

- A. May have a history of chronic hypoxaemia
- B. Will have abnormal platelet function if polycythemia is secondary to chronic hypoxaemia
- C. is more likely to develop venous thrombosis
- D. Has a normal oxygen saturation
- E. May have high erythropoietin levels

2. In a patient with spinal cord injury, all the following are correct EXCEPT:

- A. Pulmonary function tests are affected in lesions at T7 or above
- B. In the first 2-3 weeks following the injury hypotension and bradycardia are frequent
- C. In the first 2-3 weeks flaccid paralysis is characteristic
- D. Pre-treatment with a non-depolarizing muscle relaxant prevent hyperkalaemia caused by suxamethonium
- E. Hypothermia is more likely during anesthesia

3. Regarding anaphylactic drug reaction, one of the following is TRUE:

- A. The severity of cutaneous manifestation correlates well with cardiovascular changes
- B. When a reaction occurs after thiopentone and muscle relaxant, the thiopentone is more likely at fault
- C. Tachycardia should be treated with beta-blocker
- D. The immediate treatment of choice is intravenous hydrocortisone
- E. Reducing the speed of administration of drug attenuate the effect of possible drug reaction

4. Indicate which is FALSE, concerning post operative nausea and vomiting:

- A. Ondanesteron reduces nausea and vomiting by acting on 5-HT receptor antagonists
- B. Phenothiazine and droperidol have their effect from antidopaminergic action
- C. Metoclopramide has primarily anticholinergic action
- D. It is more common in females than males
- E. Thiopentone causes more nausea and vomiting than propofol

5) All the following are considered as physiological changes in elderly, EXCEPT:

- A. Increased closing volume.
- B. They require lower doses of drugs in general
- C. Reduced cardiac output .
- D. Increased serum creatinine
- E. Increased heat loss under general anesthesia compared to adult patient.

6. Epidural facts include all the following EXCEPT:

- A. A sensory block up to T12 should be sufficient for a caesarean section
- B. Segmental spread of local anesthetic increases with elderly
- C. Excluding caudals, the L2/L3 and L3/L4 interspaces are usually the easiest places to enter epidural
- D. The incidence of post-surgical thromboembolic is reduced with epidural
- E. Epidural is not contraindicated in patients on prolonged NSAIDs

7. Regarding hyperthyroidism, which is FALSE:

- A. Antithyroid drugs act by increasing the iodine uptake by the thyroid gland
- B. Presentation may be as an abdominal emergency
- C. Tachyarrhythmias are a common problem with thyrotoxicosis
- D. Patient treated with radioactive iodine or subtotal thyroidectomy often develop hypothyroidism
- E. Thyroid hormone levels may be low following cardiopulmonary bypass

8. physiological changes associated with hypothermia include all the following EXCEPT:

- A. Vasodilation and bradycardia in severe hypothermia
- B. Increased blood viscosity
- C. Respiratory and metabolic acidosis in severe hypothermia
- D. Hypoglycaemia
- E. Ventricular fibrillation occurring below 28 c

9. Pulmonary oedema, indicate which one is TRUE:

- A. It is always bilateral
- B. It is more likely to occur during surgery than postoperatively
- C. Diuretics are always indicated
- D. It can be a complication of respiratory obstruction
- E. Treatment always the same



10. Laryngospasm, all the following are TRUE , EXCEPT:

- A. Is more likely in young children than in adult
- B. Is more likely with isoflurane induction than in sevoflurane
- C. Incidence is reduced if patient stop smoking /24/ h prior to surgery
- D. Tends to be caused more by thiopentone than by propofol
- E. Incidence increases by upper respiratory tract infection.

11. In a patient with well controlled insulin dependent diabetes, for elective surgery, indicate which one is TRUE:

- A. Glucose free solutions should be used
- B. Blood glucose should be monitored every three hours, pre and postoperatively.
- C. Beta-blockers are contraindicated
- D. Volatile agents should not be used
- E. The full morning dose of insulin should be given on the day of surgery

12. Concerning post traumatic acute renal failure (ARF),indicate which one is TRUE:

- A. Mortality is 50%
- B. Mannitol is contraindicated in the management
- C. The oliguric phase lasts 10 days
- D. Disseminated intravascular coagulation (DIC) can occur
- E. There is an increased urinary urea level with normal creatinine level.

13. Massive blood transfusion , all the following statement are TRUE, EXCEPT

- A. Is defined as 10% of blood volume transfused within 10 minutes.
- B. Citrate toxicity is very common
- C. Causes an increase in serum potassium
- D. Causes a reduction in serum calcium
- E. Causes metabolic acidosis.

14. The appropriate management of a patient who becomes agitated and confused after the tourniquet is deflated during intravenous regional anaesthesia with lidocaine would be one of the following

- A. Suxamethonium
- B. Morphine
- C. Propofol
- D. Mannitol
- E. Fentanyl

15. Concerning fat embolism syndrome, all the following are TRUE, EXCEPT :

- A. A petechial rash can be seen.
- ☒ B. A fall in haematocrit is characteristic
- C. Mental changes may be due to hypoxia
- D. There may be a pyrexia
- E. It occurs more commonly in pelvis and long bone fractures .

16. Low molecular weight heparin, which one is TRUE :

- A. Activity is effectively measured by activated partial Thromboplastin time (aptt)
- B. Strongly binds to plasma proteins
- C. Has a shorter plasma half-life than a standard heparin
- D. Has its effect reversed by an equivalent dose of protamine
- ☒ E. Has a prolonged plasma clearance in patients with renal failure

17. Concerning interosseous injection, one is TRUE:

- ☒ A. It is the route of choice in the resuscitation of small children
- B. Swelling around the needle is not a reason for discontinuation
- C. Aspiration of marrow confirms the position
- D. The femur is the best to use.
- E. Only crystalloid can be given

18. Features of tension pneumothorax include all the following , EXCEPT:

- A. Raised jugular venous pressure (JVP)
- B. Pulsus paradoxus
- ☒ C. Tracheal deviation towards the lesion
- D. Loss of cardiac dullness to percussion
- E. Decreased breath sound by auscultation .

19. All the following are effective in attenuating the pressor response to intubation, EXCEPT

- A. Intravenous lidocaine
- B. Fentanyl.
- C. Angiotensin-converting enzyme (ACE ) inhibitors
- ☒ D. A large dose of an induction agent
- E. Beta blockers

20. One of the following increase the risk of cauda equine syndrome (CES):

- A. Old age
- B. The use of small bore needle.
- C. The lithotomy position
- D. The use of barbotage
- E. The prone position

21. Sick cell trait, all the following are TRUE , EXCEPT:

- A. Is found in patients heterozygous for HBS
- B. Causes severe anaemia
- C. Is associated with reduced P50
- D. Can be differentiated from sickle cell disease on electrophoresis
- E. Causes haemolysis

22. A poorly controlled, insulin dependent diabetic, pregnant mother will have all the following, EXCEPT:

- A. An increased risk of eclampsia
- B. Hypoglycaemic episodes in the first trimester
- C. A large baby
- D. A foetus suffering from chronic hypoxia
- E. A foetus with surfactant production proportional to the serum insulin levels

23. The transurethral resection of the prostate (TURP) Syndrome, all are TRUE, EXCEPT:

- A. Is associated with hypokalaemia
- B. Presents with convulsions
- C. Is prevented by spinal anaesthesia
- D. Is associated with hyponatraemia
- E. Requires a diuretic for the treatment

24. A 63-year-old man presents for an elective laparoscopic cholecystectomy. He is obese, has angina unpredictably and at rest, and chronic obstructive pulmonary disease (COPD). Which of the following would be his ASA classification?

- A. ASA I
- B. ASA II
- C. ASA III
- D. ASA IV
- E. ASA V



25. With the neck extended, mouth open, and tongue protruded, the patient's uvula is not visible. The airway should be classed as which of the following?
- A. Mallampati 1
  - B. Mallampati 2
  - C. Mallampati 3
  - D. Mallampati 4
  - E. Connack 2
26. Which of the following is the most significant risk factor for postoperative nausea and vomiting?
- A. Female gender
  - B. Surgery on the breast
  - C. Smoking
  - D. Nonsteroidal anti-inflammatory agents given during surgery
  - E. Age over 60 years
27. Which of the following is an important test for patients with suspected OSA prior to weight loss surgery?
- A. Complete blood count (CBC)
  - B. Electrolytes
  - C. Chest x-ray
  - D. Polysomnography
  - E. Exercise stress test
28. Morbidly obese patients have which of the following alterations in respiratory physiology?
- A. Increased FRC
  - B. Reduced peak inspiratory pressures
  - C. Increased lung volumes
  - D. Increased chest wall compliance
  - E. Alveolar collapse with ventilation/perfusion mismatch.
29. Which of the following medications may be continued prior to performing an neuraxial anesthetic?
- A. Aspirin
  - B. Warfarin
  - C. Clopidogrel
  - D. Low-molecular-weight hep treatment dose
  - E. Ethienopyridine

30. TRUE statements regarding non obstetric surgery during pregnancy include all of the following EXCEPT:
- A. Nitrous oxide is best avoided in early pregnancy
  - B. Regional anaesthesia, when appropriate, is a reasonable alternative
  - C. Aspiration prophylaxis should be accomplished with either a non particulate antacid and/or an H2-blocker combined with a gastric motility agent
  - D. Benzodiazepines are contraindicated due to the increased incidence of cleft palate
  - E. Left uterine displacement (LUD) for the prevention of aortocaval compression is not necessary in the first trimester
31. The following statements regarding pregnancy and mitral stenosis are TRUE, EXCEPT:
- A. Mitral stenosis is the most common acquired cardiac lesion presenting during pregnancy
  - B. Epidural analgesia is indicated to attenuate the increased cardiac output and tachycardia associated with the pain of labor
  - C. Ephedrine is preferred as a vasopressor
  - D. Invasive hemodynamic monitoring is indicated in cases of symptomatic mitral stenosis
  - E. Maternal expulsive efforts should be avoided during the second stage of labor
32. A 2-year-old child (weight 13 kg) is scheduled for circumcision. The most suitable dose of local anesthetic for a dorsal penile block is:
- A. Bupivacaine 0.25% 8 mL
  - B. Lidocaine 1% 8 mL
  - C. Lidocaine 1.5% with epinephrine 1:200,000 8 mL
  - D. Bupivacaine 0.25% 15 mL
  - E. Bupivacaine 0.125% 15 mL
33. What is the maximum amount of leakage current from equipment:
- A. 10 milli amps
  - B. 100 milli amps
  - C. 1 amp
  - D. 10 amp
  - E. 10 micro amps



~~34.~~ Concerning heat loss from an anesthetized patient which is TRUE

- A. Radiation is responsible for about 40%
- B. Convection into the operating room account for 50%
- C. Evaporation from wound and skin do not contribute
- D. Respiratory losses is responsible for 40%
- E. Conduction is the most important

~~35.~~ Concerning the gas laws which is TRUE ?

- A. Boyle's law refers to the relationship between temperature and pressure of a gas
- ~~B.~~ Temperature is measured on the absolute temperature scale
- C. Temperature is a constant in Charles' law
- ~~D.~~ Boyle's law states that at a constant volume pressure varies with temperature
- E. The gas laws are only TRUE for air

~~36.~~ A patient is having pain on the dorsum of the foot and the lateral aspect of the knee . What nerve root is involved?

- A. L3
- B. L4
- ~~C.~~ L5
- ~~D.~~ S1
- E. S2

~~37.~~ While performing an axillary block what nerve was likely encountered after the artery posterior wall?

- A. Ulnar
- ~~B.~~ Radial
- C. Musculocutaneous
- D. Median
- E. Intercosto brachial

~~38.~~ To make a skin graft from the external face of the thigh which nerve is to be anesthetized ?

- A. Obturator
- B. Sciatic
- ~~C.~~ Lateral femoral cutaneous
- D. Femoral
- E. genitofemoral

39. Which of the following terms is defined as a perception of an ordinary non-noxious stimulus as pain ?

- A. Hyperalgesia
- B. Allodynia
- C. Dysesthesia
- D. Hyperesthesia
- E. Hyperpathia

40. The fuel cell, all the following are TRUE , EXCEPT:

- A. Acts as an oxygen-dependent battery
- B. Is unaffected by temperature
- C. Current flow depends on the uptake of oxygen at the cathode
- D. Gives a high reading if oxygen pressure increases
- E. Has a typical response time of 30 to 40 seconds

41. Concerning the Ayre's T piece or its Jackson Rees Modification, all are correct, EXCEPT:

- A. A fresh gas flow of 2-3 times greater than the spontaneous Minute ventilation is required to ensure normocapnia
- B. It is more efficient for controlled ventilation than spontaneous ventilation
- C. In a normocapnic ventilated patient, doubling the length of the tubing from the T piece does not affect the  $p_{aO_2}$
- D. It is classified as a Mapleson F system if an open bag is attached to the expiratory limb
- E. The expiratory limb must have a 55mm internal diameter to avoid excessive resistance

42. Regarding gauge pressure, all the following are TRUE, EXCEPT :

- A. When the cylinder is empty the gauge records 0 bar
- B. The absolute pressure in the empty cylinder is about 1 bar
- C. A full oxygen cylinder has a gauge pressure of 137 bar
- D. Absolute pressure equals atmospheric pressure minus gauge pressure
- E. Arterial blood pressure readings are gauge pressures

43. In a Venturi-type oxygen therapy mask, all are TRUE, EXCEPT

- A. The delivered flow should exceed 20 litres per minute
- B. Oxygen concentration depend on the orifice or the size of the constriction .
- C. Plugging the holes in the side of the mask will increase the delivered oxygen concentration
- D. Rebreathing usually does not occur
- E. Increasing the diameter of the orifice decreases the concentration of the oxygen delivered

44. The likelihood of the onset of the turbulent flow is predicted by increase of all the followings, EXCEPT :

- A. The density of the fluid
- B. The viscosity of the fluid
- C. The velocity of the fluid.
- D. The diameter of the tube.
- E. The square root of the driving pressure

45. With regard to heat, all the following are TRUE , EXCEPT :

- A. Specific heat is the heat energy required to raise the temperature of 1 kg of a given object by 1\_C
- B. Heat capacity is the amount of heat energy required to change the structure of a substance without a change in temperature
- C. Frost on a nitrous oxide cylinder can be explained by latent heat of vaporization
- D. The specific heat capacity of a gas is less than that of liquids
- E. The units of heat capacity are joules/Kg

46. With regard to humidity all the following are TRUE, EXCEPT:

- A. In hair hygrometers the hair becomes longer with increased humidity
- B. Regnault's hygrometer contains mercury
- C. High humidity reduces the risk of electrocution
- D. Relative humidity equals vapour pressure / svp at that temperature.
- E. If the temperature of a gas increases the relative humidity falls

47. Pulse oximeters, all are TRUE , EXCEPT :

- A. Rarely can cause burns to low perfused skin under the probe
- B. Are inaccurate in the presence of HbF
- C. Are inaccurate in the presence of methaemoglobin
- D. Are accurate in negro patients
- E. Have a faster response time than transcutaneous oxygen electrodes.



48. In cardioversion, indicate which is **TRUE**:

- A. It is the voltage that is important
- B. Only 10%–30% of the energy applied to the chest wall will pass through the myocardium
- C. Alternating current capacitor discharge is the preferred technique
- D. If alternating current is used it must be synchronised with the R wave
- E. The maximum energy applied should not exceed 100 J.

49. Below the inguinal ligament, the femoral vein is relative to the femoral artery

- A. Lateral
- ☒ B. Medial
- C. Anterior
- D. Posterior
- E. Deep

50. Regarding Glycopyrronium, which is **TRUE**?

- ☒ A. Is a quaternary amine
- B. Is shorter acting than atropine
- C. Causes foetal tachycardia
- D. Crosses the blood brain barrier
- E. Is antiemetic

51. Enflurane, which is **FALSE**?

- A. Is an ether
- B. SVP is 175 mmHg at 20°C
- C. Depresses the myocardium
- D. Vasodilates
- ☒ E. Is metabolised to bromide

52. All the following statements are **TRUE** concerning Nitrous Oxide **EXCEPT**:

- A. It may induce post-operative deafness
- ☒ B. It forms a reversible complex with haemoglobin
- C. It may induce teratogenicity with prolonged exposure
- D. It may induce diffusion hypoxia
- E. It may interfere with B12 metabolism

53. Etomidate, which is FALSE?

- A. Is dissolved in 35% aqueous propylene glycol
- B. Dose not lower arterial pressure
- C. Causes nausea
- D. Dissolves in erythrocytes
- ☒ E. Causes cortisol secretion

54. Mivacurium, which is TRUE?

- A. Is a steroid
- B. Is metabolised in the liver
- C. Has a duration of 30 mins
- ☒ D. Onset in 30 secs
- E. Causes slight bradycardia

55. Plasma cholinesterase deficiency may be seen in all the following EXCEPT:

- A. In malnutrition
- B. In pregnancy
- C. In inheritance of the silent gene
- ☒ D. In coronary artery disease
- E. In hepatic failure

56. Which of the following is the MOST sensitive means of detecting venous air embolism (VAE)?

- A. EEG
- B. Pulmonary artery catheter
- ☒ C. Transesophageal echocardiography
- D. Mass spectrometry
- E. Right atrial catheterization

57. The anterior and posterior spinal arteries originate from the:

- ☒ A. Common carotid and vertebral arteries, respectively
- B. Internal carotid and vertebral arteries, respectively
- C. Internal carotid and posterior cerebral arteries, respectively
- D. Vertebral and anterior cerebellar arteries, respectively
- E. Vertebral and posterior inferior cerebellar arteries, respectively

58. Which of the following structures in the antecubital fossa is the MOST medial?

- A. Brachial artery
- B. Cephalic vein
- C. Tendon of the biceps
- ☒ D. Median nerve
- E. Musculocutaneous nerve

59. Cutaneous innervation of the plantar surface of the foot is provided by the:

- A. Sural nerve
- B. Posterior tibial nerve
- C. Saphenous nerve
- D. Deep peroneal nerve
- ☒ E. Superficial peroneal nerve

60. Which of the following is the most reliable indicator of adequate reversal of neuromuscular block?

- A. Inspiratory force equal to -30 Cm H<sub>2</sub>O
- B. Sustained head lift for 5 seconds
- C. Train-of-four ratio of 0.7
- D. Twitch height at 100 % of control
- E. Vital capacity of 15 ml/Kg

61. Given the following set of data, 2, 2, 2, 6, 4, 2, the Mode is :

- ☒ A. 6
- B. 2
- C. 18
- D. 3
- E. Cannot be determined by the information given

62. In a patient with sickle cell disease, which of the following is LEAST likely to trigger sickling?

- A. Hypothermia
- B. Increased systemic vascular resistance ✓
- C. Low CVP
- D. Low mixed venous PO<sub>2</sub>
- ☒ E. Metabolic alkalosis



63. With regard to succinylcholine, ONE is TRUE:

- A. The risk of anaphylaxis is higher than with other neuromuscular blocking drugs
- B. The hyperkalaemic response after denervation burn injury peaks at 3 weeks
- C. The hyperkalaemic response does not occur if the baseline plasma potassium is normal
- D. Cardiac arrest after its administration is more common in acute renal failure patients
- E. Cardiac arrest is more common in patients given succinylcholine on the first day of artificial ventilation

64. During N<sub>2</sub>O anaesthesia, which of the following expands most rapidly?

- A. Air in the intestine
- B. Endotracheal tube cuff
- C. Pneumothorax
- D. Air bubble in the blood
- E. Air in the middle ear

65. All the following factors affect drug distribution EXCEPT:

- A. Physical and chemical characteristics of the drug
- B. Cardiac output
- C. Capillary permeability in various tissues
- D. Drug metabolism
- E. Lipid content of the tissue

66. Features of an anaphylactic reaction to thiopentone include all the following EXCEPT:

- A. Periorbital oedema
- B. Petechial rash
- C. Marked hypotension
- D. Bronchospasm
- E. A fall in circulating level of (IgE)

67. Concerning thiazide diuretics, all the following are TRUE EXCEPT:

- A. Are vasodilators
- B. Affect chloride transport in the distal tubule
- C. Can increase plasma cholesterol
- D. Are indicated for the treatment of ascitis in liver disease
- E. May cause gout

68. Preload can be reduced by all the following drugs EXCEPT:

- A. ACE inhibitors
- B. Nitrates
- C. Hydralazine
- D. Adenosine
- ☒ E. Thiazide

69. Concerning the stress response to surgery, ONE is TRUE:

- A. Occurs mainly during operation
- B. Can not be obtunded by high dose opioid
- ☒ C. Is completely eliminated by effective thoracic epidural analgesia
- D. Is beneficial for postoperative recovery
- E. Promotes postoperative catabolism

70. The MOST common cause of postoperative hepatic dysfunction is :

- A. Drug toxicity
- B. Infection
- C. Trauma
- ☒ D. Hepatic ischaemia
- ☒ E. Halothane anaesthesia

71. All the following are adverse cardiovascular system effects of perioperative pain EXCEPT:

- A. Tachycardia
- ☒ B. Decreased stroke volume
- C. Increased cardiac work
- D. Increased myocardial oxygen consumption
- E. Increased risk of DVT

72. Anaesthetic considerations in diabetic patients include all the following EXCEPT:

- A. Good control of blood glucose is important
- B. Delayed gastric emptying
- ☒ C. It increases the epidural dose required
- D. The sliding scale guided by urine glucose is not efficient
- E. It causes impaired renal function

73. All the following statements about dilatation and curettage (D&C) are TRUE, EXCEPT:

- A. It involves dilatation of the uterine cervix
- B. During general anaesthesia halothane is contraindicated
- C. Postoperative nausea and vomiting are common
- D. It can be done on day case surgery basis
- E. Shock may indicate uterine perforation by the operator

74. Concerning preoxygenation, ONE is TRUE:

- A. Can be started in the ward prior to coming to theatre
- B. As part of rapid sequence induction occurs before induction of anaesthesia
- C. Causes a significant increase in the oxygen bound to haemoglobin in the blood
- D. Should take place through an anaesthetic circuit and a high oxygen flow rate and the mask held just off the face
- E. Allows for acceptable oxygenation during 10 minutes of apnoea

75. Blood viscosity depends on all the following factors EXCEPT ?

- A. Temperature
- B. Plasma proteins
- C. Age
- D. Haemoglobin concentration
- E. Systolic blood pressure

Good Luck